

PROGRAM ACQUISITION COSTS BY WEAPON SYSTEM



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**DEPARTMENT OF DEFENSE
FY 2005 BUDGET
PROGRAM ACQUISITION COSTS
(Dollars in Millions)**

Weapon Programs by Service & Name

		FY2003	FY2004	FY2005	Page No.
<u>Army</u>					
	<u>AIRCRAFT</u>				
AH-64D	Longbow Apache	943.4	764.9	554.8	1
CH-47	Chinook	731.3	524.3	555.6	2
OH-58D	Kiowa Warrior	43.1	50.9	33.8	3
RAH-66	Comanche Helicopter	873.6	1,068.0	1,241.7	4
UH-60	Blackhawk Helicopter	402.1	411.3	192.1	5
<u>Navy</u>					
E-2C	Hawkeye	393.6	570.1	845.0	6
EA-6B	Prowler	368.1	370.2	199.7	7
F/A-18E/F	Hornet	3,401.1	3,217.8	3,120.4	8
H-1	USMC H-1 Upgrades	232.2	399.5	332.2	9
MH-60R	Helicopter	207.1	461.7	487.9	10
MH-60S	Helicopter	375.7	467.0	482.0	11
T-45TS	Goshawk	218.2	336.7	253.6	12
<u>Air Force</u>					
B-2	Stealth Bomber	323.8	288.2	341.0	13
C-17	Airlift Aircraft	4,343.5	3,592.7	4,039.6	14
CAP	Civil Air Patrol	5.2	8.5	2.3	15
E-8C	Joint Surveillance Target Attack Radar System (Joint Stars)	342.8	96.7	134.5	16
F-15E	Eagle Multi-Mission Fighter	344.7	322.7	296.8	17
F-16C/D	Falcon Multi-Mission Fighter	352.5	403.4	435.9	18
F-22	Raptor	5,370.3	5,043.2	4,721.5	19
<u>DoD Wide/ Joint</u>					
C-130J	Airlift Aircraft	867.1	856.8	1,540.3	20
JPATS	Joint Primary Aircraft Training System	232.3	297.7	309.6	21
JSF	Joint Strike Fighter	3,274.3	4,251.7	4,571.9	22
UAV	Unmanned Aerial Vehicles	1,211.4	1,340.5	1,973.4	23
V-22	Osprey	1,610.5	1,708.7	1,756.5	24
<u>MISSILES</u>					
<u>Army</u>					
HIMARS	High Mobility Artillery Rocket System	358.7	314.2	378.9	25
JAVELIN	AAWS-M	222.2	140.6	118.7	26

**DEPARTMENT OF DEFENSE
FY 2005 BUDGET
PROGRAM ACQUISITION COSTS
(Dollars in Millions)**

Weapon Programs by Service & Name

<u>Navy</u>	<u>Munitions</u>	<u>FY2003</u>	<u>FY2004</u>	<u>FY2005</u>	<u>Page</u> <u>No.</u>
ESSM	Evolved Seasparrow Missile	42.0	102.0	80.3	27
RAM	Rolling Airframe Missile	59.2	48.0	47.4	28
STANDARD	Missile (Air Defense)	175.6	228.2	249.1	29
TOMAHAWK	Cruise Missile	534.4	429.1	285.0	30
TRIDENT II	Sub Launched Ballistic Missile	611.1	710.9	877.4	31
 <u>Air Force</u>					
SFW	Sensor Fuzed Weapon	124.1	117.0	117.0	32
WCMD	Wind Corrected Munitions	98.0	89.4	86.7	33
 <u>DoD WIDE/</u>					
<u>JOINT</u>					
AIM-9X	Sidewinder	113.5	81.4	97.5	34
AMRAAM	Advanced Medium Range				
	Air-to-Air Missile	182.4	183.1	183.7	35
JASSM	Joint Air-to-Surface Standoff				
	Missile	118.5	147.3	221.0	36
JDAM	Joint Direct Attack Munition	816.2	735.1	673.0	37
JSOW	Joint Standoff Weapon	188.5	202.0	148.9	38
SDB	Small Diameter Bomb	56.3	125.4	115.8	39
 <u>Navy</u>					
<u>VESSELS</u>					
CVN-77	Aircraft Carrier	849.3	1,516.1	978.9	40
DD(X)	DD(X) Destroyer	916.3	1,088.9	1,450.6	41
DDG-51	AEGIS Destroyer	3,012.4	3,406.5	3,591.5	42
LCS	Littoral Combat Ship	35.3	166.2	352.1	43
LPD-17	San Antonio Class Amphibious				
	Transport Ship	594.0	1,325.5	975.6	44
NSSN	Virginia Class Submarine	2,335.4	2,514.3	2,596.3	45
RCOH	CVN Refueling Complex Overhaul	217.3	221.0	333.1	46
SSGN	SSGN Conversions	1,183.3	1,227.5	658.4	47
T-AKE	Auxiliary Dry Cargo Ship	386.0	722.3	768.4	48
 <u>Army</u>					
<u>COMBAT VEHICLES</u>					
FCS	Future Combat System	370.0	1,683.6	3,198.1	49
M1A2	Abrams Tank Upgrade	551.1	207.9	308.3	50
M2A3	Bradley Base Sustainment	437.4	344.5	71.4	51
IAV	Interim Armored Vehicle (Stryker)	930.3	1,043.4	957.0	52

**DEPARTMENT OF DEFENSE
FY 2005 BUDGET
PROGRAM ACQUISITION COSTS
(Dollars in Millions)**

Weapon Programs by Service & Name

<u>SPACE PROGRAMS</u>		<u>FY2003</u>	<u>FY2004</u>	<u>FY2005</u>	<u>Page No.</u>
<u>Army</u>					
DSCS	Ground Systems	104.9	111.7	109.1	53
<u>Navy</u>					
MUOS	Mobile USER Objective System	110.5	267.7	571.1	54
<u>Air Force</u>					
AEHF	Advanced Extremely High Frequency Satellite	802.6	802.3	710.6	55
DSP	Defense Support Program	107.6	112.1	116.5	56
EELV	Evolved Expendable Launch Vehicle	231.4	612.7	638.0	57
MLV	Medium Launch Vehicles	47.8	89.4	102.9	58
NAVSTAR GPS	NAVSTAR Global Positioning System	614.3	500.0	582.9	59
SBIRS-H	Space Based Infrared Systems-High	775.3	610.2	508.4	60
TITAN	Heavy Launch Vehicle	254.4	45.1	74.3	61
WGS	Wideband Gapfiller Satellite	200.5	58.1	113.8	62
<u>OTHER PROGRAMS</u>					
<u>Army</u>					
FHTV	Family of Heavy Tactical Vehicles	271.9	234.4	86.5	63
FMTV	Family of Medium Tactical Vehicles	659.0	344.7	505.7	64
HMMWV	High Mobility Multipurpose Wheeled Vehicles	334.9	431.4	303.7	65
<u>DoD WIDE/JOINT</u>					
MD	Missile Defense	7,581.8	9,002.9	10,193.0	66

**AIRCRAFT PROGRAMS
ARMY**

Longbow Apache

Description: Longbow Apache consists of a mast mounted Fire Control Radar (FCR) integrated into an upgraded and enhanced AH-64 airframe. The FCR effort is being accomplished by a joint venture team comprised of two companies, Northrop-Grumman, Baltimore, MD and Lockheed-Martin Corporation, Owego, NY. Boeing Corporation is the prime contractor for the Longbow Apache program.

Mission: Longbow Apache will provide the AH-64 a fire and forget HELLFIRE capability, greatly increasing weapon system effectiveness and aircraft survivability.

**Program Acquisition Costs
(\$ Millions)**

	<u>FY 2003</u>		<u>FY 2004</u>		<u>FY 2005</u>	
	<u>(Qty)</u>	<u>Amt</u>	<u>(Qty)</u>	<u>Amt</u>	<u>(Qty)</u>	<u>Amt</u>
Procurement	(74)	899.0	(64)	763.2	(19)	554.8
RDT&E		<u>44.4</u>		<u>1.7</u>		<u>-</u>
TOTAL		943.4		764.9		554.8

AIRCRAFT PROGRAMS ARMY

CH-47 CHINOOK

Description: The CH-47F program will remanufacture 301 of the current fleet of 429 CH-47Ds, install a new digital cockpit, and make modifications to the airframe to reduce vibration. Additionally, the program will remanufacture the Army's MH-47D/E fleet to the MH-47G configuration. The CH-47F upgraded cockpit will provide future growth potential and will include a digital data bus that permits installation of enhanced communications and navigation equipment for improved situational awareness, mission performance, and survivability. Airframe structural modifications will reduce harmful vibrations, reducing operation and support (O&S) costs and improving crew endurance. Other airframe modifications reduce by about 60 percent the time required for aircraft tear down and build-up after deployment on a C-5 or C-17. These modifications significantly enhance the Chinook's strategic deployment capability. Installation of the more powerful and reliable T55-GA-714A engines will improve fuel efficiency and enhance lift performance by approximately 3,900 lbs. An improved, crashworthy extended range fuel system (ERFS II) will enable Chinook self-deployment and extend the operational radius

Mission: To provide a recapitalization system designed to transport ground forces, supplies, ammunition, and other battle-critical cargo in support of worldwide combat and contingency operations.

Program Acquisition Costs (\$ Millions)

	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>
	<u>(Qty)</u> <u>Amt</u>	<u>(Qty)</u> <u>Amt</u>	<u>(Qty)</u> <u>Amt</u>
Procurement	728.0	510.2	542.7
RDT&E	<u>3.3</u>	<u>14.1</u>	<u>12.9</u>
TOTAL	731.3	524.3	555.6

AIRCRAFT PROGRAMS ARMY

ARMED OH-58D (KIOWA WARRIOR)

Description: The Armed OH-58D is a single engine, 4-bladed main rotor helicopter that has been modified with television, Thermal Imaging System (TIS), and laser rangefinder-designator incorporated into a Mast-Mounted Sight (MMS). Designed to operate autonomously, the Kiowa Warrior provides command and control, target acquisition, target designation, reconnaissance, and light attack capabilities under day, night, and adverse weather conditions. It provides adjustment of conventional artillery as well as spotting and laser designation for precision guided munitions. The Kiowa Warrior is the Army's first fully digitized helicopter. The prime contractor is Bell Helicopter Textron, Inc. of Fort Worth, TX and the engines are produced by Rolls Royce Engines of Indianapolis, IN.

Mission: The Kiowa Warrior provides commanders with a survivable, real-time combat information, command and control reconnaissance, security, aerial observation, and target acquisition-designation system to operate with attack helicopter, air cavalry, and field artillery units during day, night, and other reduced visibility conditions.

Program Acquisition Costs (\$ Millions)

	<u>FY 2003</u>		<u>FY 2004</u>		<u>FY 2005</u>	
	<u>(Qty)</u>	<u>Amt</u>	<u>(Qty)</u>	<u>Amt</u>	<u>(Qty)</u>	<u>Amt</u>
Procurement		41.3		50.9		33.8
RDT&E		<u>1.8</u>		<u>-</u>		<u>-</u>
TOTAL		43.1		50.9		33.8

**AIRCRAFT PROGRAMS
ARMY**

RAH-66 COMANCHE HELICOPTER

Description: The RAH-66 Comanche Helicopter program will develop an armed reconnaissance helicopter which will replace the Army's rapidly aging fleet of OH-58 and AH-1 aircraft. Two development contracts have been awarded. Airframe and avionics development is being done by a joint venture between United Technologies Corporation, Sikorsky Aircraft Division of Stratford, CT and the Boeing Company of Philadelphia, PA. Engine development for the T-800 growth engine is being done by Light Helicopter Turbine Engine Company, a partnership of Honeywell, Phoenix, AZ and Rolls Royce, Indianapolis, IN.

Mission: The RAH-66 will be used for armed reconnaissance and light attack missions.

**Program Acquisition Costs
(\$ Millions)**

	<u>FY 2003</u>		<u>FY 2004</u>		<u>FY 2005</u>	
	<u>(Qty)</u>	<u>Amt</u>	<u>(Qty)</u>	<u>Amt</u>	<u>(Qty)</u>	<u>Amt</u>
Procurement		8.0		-		12.0
RDT&E		<u>865.6</u>		<u>1,068.0</u>		<u>1,229.7</u>
TOTAL		873.6		1,068.0		1,241.7

Note: Comanche has no procured units until FY 2007

**AIRCRAFT PROGRAMS
ARMY**

UH-60 UTILITY HELICOPTER (BLACKHAWK)

Description: The BLACKHAWK is a twin engine, single-rotor helicopter that is designed to carry a crew of four and a combat equipped squad of eleven or an equal cargo load. It is also capable of carrying external loads of up to 6,000 lbs. The prime contractor is Sikorsky Aircraft of Stratford, CT.

Mission: The BLACKHAWK provides a highly maneuverable, air transportable, troop carrying helicopter for all intensities of conflict, without regard to geographical location or environmental conditions. It moves troops, equipment and supplies into combat and performs aeromedical evacuation and multiple functions in support of the Army's air mobility doctrine for employment of ground forces.

**Program Acquisition Costs
(\$ Millions)**

	<u>FY 2003</u>		<u>FY 2004</u>		<u>FY 2005</u>	
	<u>(Qty)</u>	<u>Amt</u>	<u>(Qty)</u>	<u>Amt</u>	<u>(Qty)</u>	<u>Amt</u>
Procurement	(19)	290.1	(17)	254.7	(8)	124.5
RDT&E		<u>112.0</u>		<u>156.6</u>		<u>67.6</u>
TOTAL		402.1		411.3		192.1

AIRCRAFT PROGRAMS **NAVY**

E-2C HAWKEYE

Description: The E-2C Hawkeye is an all weather, carrier-based, airborne early warning aircraft. Prime contractors are Northrop-Grumman Corporation of St. Augustine, FL for the airframe and Allison Engine Company, Indianapolis, IN for the engine. The budget request supports a 4-year multiyear procurement and the development of the next generation E-2C aircraft to provide a long range air and surface picture; theater air and missile defense; and an expanded littoral capability to support operations for the next 25 years.

Mission: The missions of the E-2C aircraft are airborne early warning, strike and control, radar surveillance, search and rescue assistance, communication relay and automatic tactical data exchange.

Program Acquisition Costs **(\$ Millions)**

	<u>FY 2003</u>		<u>FY 2004</u>		<u>FY 2005</u>	
	<u>(Qty)</u>	<u>Amt</u>	<u>(Qty)</u>	<u>Amt</u>	<u>(Qty)</u>	<u>Amt</u>
Procurement	(5)	286.6	(2)	226.8	(2)	248.0
RDT&E		<u>107.0</u>		<u>343.3</u>		<u>597.0</u>
TOTAL		393.6		570.1		845.0

AIRCRAFT PROGRAMS **NAVY**

EA-6B PROWLER

Description: The EA-6B Prowler is a 4-seat twin engine derivative of the A-6 Attack aircraft that is equipped with a computer-controlled electronic surveillance and control system and high power jamming transmitters. The overall goals of the modification program are to upgrade the airframe structure and avionics systems to increase the life of the aircraft and to expand the aircraft's jamming capabilities. Contractors are Northrop Grumman and AIL Systems.

Mission: The mission of the EA-6B aircraft is to provide all weather electronic countermeasures (ECM) in support of Navy and Marine Corps strike forces. The budget request includes funding to modify the EA-6B aircraft.

Program Acquisition Costs **(\$ Millions)**

	<u>FY 2003</u>		<u>FY 2004</u>		<u>FY 2005</u>	
	<u>(Qty)</u>	<u>Amt</u>	<u>(Qty)</u>	<u>Amt</u>	<u>(Qty)</u>	<u>Amt</u>
Procurement		314.2		334.8		165.7
RDT&E		<u>53.9</u>		<u>35.4</u>		<u>34.0</u>
TOTAL		368.1		370.2		199.7

AIRCRAFT PROGRAMS **NAVY**

F/A-18E/F HORNET

Description: The F/A-18E/F is a twin-engine, high-performance, multi-mission, tactical aircraft for deployment in Navy fighter and attack squadrons. The F/A-18E/F possesses enhanced range, payload and survivability features compared with the current C/D model aircraft and is designed to replace the F-14 fighter aircraft. Prime contractors are Boeing Aircraft Corporation of St. Louis, MO for the airframe and General Electric Company, Aircraft Engine Division of Lynn, MA for the engines. Northrop Grumman Corporation, Hawthorne, CA is a major subcontractor. The budget request supports a follow-on five year multiyear procurement in FY 2005-2009.

Mission: The F/A-18E/F is a strike fighter capable of performing the following missions: strike, interdiction, close air support, fighter escort, and fleet air defense.

Program Acquisition Costs **(\$ Millions)**

	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>
	<u>(Qty)</u> <u>Amt</u>	<u>(Qty)</u> <u>Amt</u>	<u>(Qty)</u> <u>Amt</u>
Procurement	(45) 3,197.0	(42) 3,044.1	(42) 2,985.8
RDT&E	<u>204.1</u>	<u>173.7</u>	<u>134.6</u>
TOTAL	3,401.1	3,217.8	3,120.4

AIRCRAFT PROGRAMS NAVY

USMC H-1 Upgrades

Description: The H-1 Helicopter Upgrades program converts AH-1W and UH-1N helicopters to the AH-1Z and UH-1Y, respectively. The upgraded helicopters will have increased maneuverability, speed, and payload capability. The upgrade scope includes a new four-bladed rotor system, new transmissions, a new four-bladed tail rotor and drive system, and upgraded landing gear. The prime contractor is Bell Helicopter Division, Fort Worth, TX.

Mission: The H-1 Upgrades aircraft provide offensive air support, utility support, armed escort, and airborne command and control during naval expeditionary operations or joint and combined operations. The budget request provides for low-rate initial production.

Program Acquisition Costs (\$ Millions)

	<u>FY 2003</u>		<u>FY 2004</u>		<u>FY 2005</u>	
	<u>(Qty)</u>	<u>Amt</u>	<u>(Qty)</u>	<u>Amt</u>	<u>(Qty)</u>	<u>Amt</u>
Procurement	(-)	-	(9)	308.5	(9)	241.8
RDT&E		<u>232.2</u>		<u>91.0</u>		<u>90.4</u>
TOTAL		232.2		399.5		332.2

AIRCRAFT PROGRAMS NAVY

MH-60R Helicopter

Description: The MH-60R Multi-Mission Helicopter Upgrade program provides battle group protection and adds significant capability in coastal littorals and regional conflicts. The upgrade scope includes new H-60 Series airframes, significant avionics improvements, enhancements to the acoustic suite, new radars and an improved electronics surveillance system. Prime contractors are Sikorsky Aircraft of Stratford, CN for the airframe and Lockheed Martin of Owego, NY for the avionics.

Mission: The MH-60R will be the forward deployed fleet's primary Anti-Submarine and Anti-Surface Warfare platform. The budget request provides funding for flight testing, non-recurring production efforts, and low rate initial production.

Program Acquisition Costs (\$ Millions)

	<u>FY 2003</u>		<u>FY 2004</u>		<u>FY 2005</u>	
	<u>(Qty)</u>	<u>Amt</u>	<u>(Qty)</u>	<u>Amt</u>	<u>(Qty)</u>	<u>Amt</u>
Procurement		117.2	(6)	385.6	(8)	409.1
RDT&E		<u>89.9</u>		<u>76.1</u>		<u>78.8</u>
TOTAL		207.1		461.7		487.9

AIRCRAFT PROGRAMS NAVY

MH-60S Helicopter

Description: The MH-60S is a versatile twin-engine helicopter used to maintain forward deployed fleet sustainability through rapid airborne delivery of materials and personnel, to support amphibious operations through search and rescue coverage and to provide an organic airborne mine countermeasures capability. The budget request supports participation in the Army's multiyear procurement. The prime contractor is Sikorsky Aircraft of Stratford, CT.

Mission: The MH-60S will conduct vertical replenishment (VERTREP), day/night ship-to-ship, ship-to shore, and shore-to-ship external transfer of cargo; internal transport of passengers, mail and cargo, vertical onboard delivery; air operations; and day/night search and rescue. Organic Airborne Mine Countermeasures (OAMCM) has been added as a primary mission for the MH-60S. Five separate sensors will be integrated into the MH-60S helicopter and will provide Carrier Battle Groups and Amphibious Readiness Groups with an OAMCM capability.

Program Acquisition Costs (\$ Millions)

	<u>FY 2003</u>		<u>FY 2004</u>		<u>FY 2005</u>	
	<u>(Qty)</u>	<u>Amt</u>	<u>(Qty)</u>	<u>Amt</u>	<u>(Qty)</u>	<u>Amt</u>
Procurement	(15)	352.5	(13)	408.5	(15)	400.8
RDT&E		<u>23.2</u>		<u>58.5</u>		<u>81.2</u>
TOTAL		375.7		467.0		482.0

**AIRCRAFT PROGRAMS
NAVY**

T-45 GOSHAWK

Description: The T-45 GOSHAWK is a derivative of the British Aerospace HAWK aircraft. The T-45 Training System will integrate aircraft, simulators, academics, and a training management system into a replacement for current intermediate and advanced phase training aircraft. The prime contractor is Boeing Aircraft Company, St. Louis, MO; British Aerospace of Kingston, England provides the center and aft fuselage; and Rolls Royce, Ltd of Bristol, England provides the engine.

Mission: The T-45 will provide undergraduate jet pilot training for Navy and Marine Corps aviators.

**Program Acquisition Costs
(\$ Millions)**

	<u>FY 2003</u>		<u>FY 2004</u>		<u>FY 2005</u>	
	<u>(Qty)</u>	<u>Amt</u>	<u>(Qty)</u>	<u>Amt</u>	<u>(Qty)</u>	<u>Amt</u>
Procurement	(8)	218.2	(14)	336.7	(8)	253.6

**AIRCRAFT PROGRAMS
AIR FORCE**

B-2 STEALTH BOMBER

Description: The B-2 is an intercontinental bomber that employs low observable technology to achieve its mission. The bomber is an all-wing, two-place aircraft with twin weapon bays. Four General Electric F-118-GE100 aircraft engines power the B-2. Northrop-Grumman Corporation, El Segundo, CA is the prime contractor for the B-2s. The FY 2005 budget request includes funding to continue modification and development of the aircraft.

Mission: The primary mission of the B-2 is to enable any theater commander to hold at risk and, if necessary, attack an enemy's war-making potential, especially those time critical targets that, if not destroyed in the first hours or days of a conflict, would allow unacceptable damage to be inflicted on the friendly side. The B-2 will also retain its potential as a nuclear bomber, reinforcing the deterrence of nuclear conflict.

**Program Acquisition Costs
(\$ Millions)**

	<u>FY 2003</u>		<u>FY 2004</u>		<u>FY 2005</u>	
	<u>(Qty)</u>	<u>Amt</u>	<u>(Qty)</u>	<u>Amt</u>	<u>(Qty)</u>	<u>Amt</u>
Procurement		91.7		122.3		96.0
RDT&E		<u>232.1</u>		<u>165.9</u>		<u>245.0</u>
TOTAL		323.8		288.2		341.0

**AIRCRAFT PROGRAMS
AIR FORCE**

C-17 AIRLIFT AIRCRAFT

Description: The C-17 is a wide-body aircraft capable of airlifting outsized and oversized payloads over intercontinental ranges, with or without in-flight refueling. Its capabilities include rapid direct delivery of forces by airland or airdrop into austere tactical environments and is capable of performing both intertheater and intratheater airlift missions. The major contractors are Boeing, Long Beach, CA (Airframe) and Pratt-Whitney, East Hartford, CT (Engine). The FY 2005 budget reflects the Air Force's planned follow-on multiyear procurement of 60 additional aircraft, which will provide needed airlift capability to meet both strategic (long range) and tactical (theater) requirements.

Mission: The C-17 will provide outsize intratheater airland/airdrop capability not available in the current airlift force and replace C-141s as they begin to retire.

**Program Acquisition Costs
(\$ Millions)**

	<u>FY 2003</u>		<u>FY 2004</u>		<u>FY 2005</u>	
	<u>(Qty)</u>	<u>Amt</u>	<u>(Qty)</u>	<u>Amt</u>	<u>(Qty)</u>	<u>Amt</u>
Procurement	(15)	4,187.7	(11)	3,408.8	(14)	3,839.9
RDT&E		<u>155.8</u>		<u>183.9</u>		<u>199.7</u>
TOTAL		4,343.5		3,592.7		4,039.6

**AIRCRAFT PROGRAMS
AIR FORCE**

CIVIL AIR PATROL (CAP) AIRCRAFT

Description: The Civil Air Patrol aircraft will be new or used propeller-driven commercial aircraft to be provided to the Civil Air Patrol by the Air Force from various contractors. When originally established, the Civil Air Patrol was to receive its operating equipment from excess inventory in the Department of Defense. In recent years, the inventory of propeller-driven aircraft in the Department of Defense has been decreasing, allowing for fewer aircraft for modernization of the CAP. The Congress, in recognition of this fact, has permitted the Air Force to procure used or new aircraft specifically for transfer to the CAP. The FY 2005 budget requests funding for the continued procurement of aircraft.

Mission: The CAP aircraft will be utilized by the CAP to perform its mission of emergency search and rescue services and to provide aeronautical education for its members and the public.

**Program Acquisition Costs
(\$ Millions)**

	<u>FY 2003</u>		<u>FY 2004</u>		<u>FY 2005</u>	
	<u>(Qty)</u>	<u>Amt</u>	<u>(Qty)</u>	<u>Amt</u>	<u>(Qty)</u>	<u>Amt</u>
Procurement	(27)	5.2	(27)	8.5	(27)	2.3

**AIRCRAFT PROGRAMS
AIR FORCE**

E-8C JOINT STARS

Description: The E-8C Joint Surveillance Target Attack Radar System (Joint STARS) aircraft is a Boeing 707 class aircraft modified to operate a target attack radar system to detect and track both moving and fixed enemy ground targets. Northrop-Grumman Corporation, Melbourne, FL is the prime contractor. The FY 2005 budget requests funding for aircraft modifications and continued upgrade development.

Mission: Joint STARS will provide battlefield surveillance, attack planning and control and post-attack damage assessment.

**Program Acquisition Costs
(\$ Millions)**

	<u>FY 2003</u>		<u>FY 2004</u>		<u>FY 2005</u>	
	<u>(Qty)</u>	<u>Amt</u>	<u>(Qty)</u>	<u>Amt</u>	<u>(Qty)</u>	<u>Amt</u>
Procurement*	(1)	280.7		38.9		45.3
RDT&E		<u>62.1</u>		<u>57.8</u>		<u>89.2</u>
TOTAL		342.8		96.7		134.5

*Includes modifications

**AIRCRAFT PROGRAMS
AIR FORCE**

F-15E EAGLE MULTI MISSION FIGHTER

Description: The F-15E is a twin-engine, two man crew, fixed swept wing aircraft. The F-15E maintains the basic F-15 air superiority characteristics while adding air-to-surface weapons capability. Prime contractors are Boeing of St. Louis, MO for the airframe, and Pratt and Whitney of East Hartford, CT for the engine. The FY2005 budget request provides for continuation of modification and development activities.

Mission: The F-15E performs both air superiority and all-weather, deep penetration, and night/under-the-weather attack with large air-to-surface weapon payloads.

**Program Acquisition Costs
(\$ Millions)**

	<u>FY 2003</u>		<u>FY 2004</u>		<u>FY 2005</u>	
	<u>(Qty)</u>	<u>Amt</u>	<u>(Qty)</u>	<u>Amt</u>	<u>(Qty)</u>	<u>Amt</u>
Procurement		274.0		200.3		181.6
RDT&E		<u>70.7</u>		<u>122.4</u>		<u>115.2</u>
TOTAL		344.7		322.7		296.8

**AIRCRAFT PROGRAMS
AIR FORCE**

F-16C/D FALCON MULTI-MISSION FIGHTER

Description: The F-16 is a single seat, fixed wing, high performance fighter aircraft powered by a single engine. The advanced technology features include a blended wing body, reduced static margin, and fly-by-wire flight control system. Prime contractors are Lockheed-Martin of Fort Worth, TX for the airframe and Pratt and Whitney of East Hartford, CT and General Electric, Evendale, OH for the engine. The FY 2005 budget request provides for continued modification and development activities.

Mission: The F-16 aircraft is a lightweight, high performance, multipurpose fighter capable of performing a broad spectrum of tactical air warfare tasks at affordable cost well into the next century.

**Program Acquisition Costs
(\$ Millions)**

	<u>FY 2003</u>		<u>FY 2004</u>		<u>FY 2005</u>	
	<u>(Qty)</u>	<u>Amt</u>	<u>(Qty)</u>	<u>Amt</u>	<u>(Qty)</u>	<u>Amt</u>
Procurement		274.9		307.3		336.3
RDT&E		<u>77.6</u>		<u>96.1</u>		<u>99.6</u>
TOTAL		352.5		403.4		435.9

AIRCRAFT PROGRAMS AIR FORCE

F-22 RAPTOR

Description: The F-22 program will develop the next generation air superiority fighter for the first part of the next century. The F-22 is being designed to penetrate enemy airspace and achieve first-look, first-kill capability against multiple targets. The contractors for Engineering & Manufacturing Development are Lockheed Martin, Marietta, GA, and Ft. Worth, TX; Boeing, Seattle, WA for the airframe; and Pratt & Whitney, West Palm Beach, FL for the engine. The FY 2005 budget request provides for continued development funding and the production of 24 aircraft, although the Air Force is committed to the buy to budget production strategy.

Mission: The F-22 will enhance U.S. air superiority capability against the projected threat and will eventually replace the F-15 aircraft.

Program Acquisition Costs (\$ Millions)

	<u>FY 2003</u>		<u>FY 2004</u>		<u>FY 2005</u>	
	<u>(Qty)</u>	<u>Amt</u>	<u>(Qty)</u>	<u>Amt</u>	<u>(Qty)</u>	<u>Amt</u>
Procurement	(21)	4,461.0	(22)	4,114.6	(24)	4,157.0
RDT&E		<u>909.3</u>		<u>928.6</u>		<u>564.5</u>
TOTAL		5,370.3		5,043.2		4,721.5

**AIRCRAFT PROGRAMS
DOD-WIDE/JOINT**

C-130J AIRLIFT AIRCRAFT

Description: The Hercules C-130J is planned to be a tactical airlift aircraft that will address the need to modernize the U.S. tactical airlift capability. The C-130J will be capable of performing a number of tactical airlift missions including deployment and redeployment of troops and/or supplies within and between command areas in a theater of operation, aeromedical evacuation, air logistic support and augmentation of strategic airlift forces. The major contractors will be Lockheed Corporation, Marietta, GA for the airframe and General Motors Corporation, Allison Division, Indianapolis, IN for the engine.

Mission: The mission of the C-130J is the immediate and responsive air movement and delivery of combat troops and supplies directly into objective areas through airlanding, extraction, airdrop, or other delivery techniques; and the air logistic support of all theater forces, including those engaged in combat operations. These aircraft will eventually replace C-130Es as they begin to retire after the turn of the century.

**Program Acquisition Costs
(\$ Millions)**

	<u>FY 2003</u>		<u>FY 2004</u>		<u>FY 2005</u>	
	<u>(Qty)</u>	<u>Amt</u>	<u>(Qty)</u>	<u>Amt</u>	<u>(Qty)</u>	<u>Amt</u>
Procurement*						
Air Force						
C-130		218.9		216.6		110.4
C-130J		<u>208.1</u>	(4)	<u>443.7</u>	(11)	<u>919.2</u>
Subtotal		427.0		660.3		1,029.6
Navy						
KC-130J	(4)	307.9		78.6	(4)	324.2
RDT&E, AF						
C-130		130.3		104.5		150.2
C-130J		<u>1.9</u>		<u>13.4</u>		<u>36.3</u>
Subtotal		<u>132.2</u>		<u>117.9</u>		<u>186.5</u>
TOTAL		867.1		856.8		1,540.3

*Does not include modifications.

**AIRCRAFT PROGRAMS
DOD-WIDE/JOINT**

JOINT PRIMARY AIRCRAFT TRAINING SYSTEM (JPATS)

Description: The Joint Primary Aircraft Training System (JPATS) is a joint Air Force/Navy program to replace both Service's fleets of primary trainer aircraft (T-37 and T-34, respectively) and associated Ground Based Training Systems (GBTS). The program includes the purchase of aircraft, simulators, ground-based training devices, training management systems, instructional courseware, and logistics support. The contractor is Beech Aircraft Corporation, Wichita, KS (airframe). The FY 2005 budget provides funding for production aircraft.

Mission: The mission of the JPATS is to support joint Air Force and Navy specialized undergraduate pilot training. It will support training of student aviators in the fundamentals of flying prior to transition into advanced training.

**Program Acquisition Costs
(\$ Millions)**

	<u>FY 2003</u>		<u>FY 2004</u>		<u>FY 2005</u>	
	<u>(Qty)</u>	<u>Amt</u>	<u>(Qty)</u>	<u>Amt</u>	<u>(Qty)</u>	<u>Amt</u>
Procurement						
Air Force	(35)	204.7	(52)	276.0	(53)	307.1
Navy	(4)	<u>27.6</u>	(2)	<u>21.7</u>	(-)	<u>2.5</u>
TOTAL		232.3		297.7		309.6

AIRCRAFT PROGRAMS DOD-WIDE/JOINT

JOINT STRIKE FIGHTER (JSF)

Description: The Joint Strike Fighter (JSF) is the next-generation strike fighter for the Air Force, Marine Corps, Navy and U.S. allies. This joint program will facilitate the development of affordable aircraft and related systems with transition of key technologies and common components to support future requirements while reducing cost and risk. The Navy and Air Force will each provide approximate equal shares of development funding for the program during the Future Years Defense Program (FYDP). The Defense Advanced Research Projects Agency (DARPA) also contributed funding for the concept flight demonstration effort. The FY 2005 budget request continues the System Development and Demonstration (SDD) phase of the program.

Mission: JSF will ultimately result in the acquisition of one or more aircraft to replace Air Force F-16s, Marine Corps AV-8Bs, and F/A-18s and provide the Navy a first day of war survivable strike fighter to complement the F/A-18E/F.

Program Acquisition Costs (\$ Millions)

	<u>FY 2003</u>		<u>FY 2004</u>		<u>FY 2005</u>	
	<u>(Qty)</u>	<u>Amt</u>	<u>(Qty)</u>	<u>Amt</u>	<u>(Qty)</u>	<u>Amt</u>
RDT&E						
Navy		1,661.5		2,159.2		2,264.5
Air Force		<u>1,612.8</u>		<u>2,092.5</u>		<u>2,307.4</u>
TOTAL		3,274.3		4,251.7		4,571.9

**AIRCRAFT PROGRAMS
DOD-WIDE/JOINT**

UNMANNED AERIAL VEHICLES (UAV)

Description: The Department is acquiring a family of Unmanned Aerial Vehicles (UAV) to satisfy tactical reconnaissance mission requirements. Each air vehicle system is being specifically tailored to conduct continuous overhead surveillance in all weather conditions during the day and night, in direct support of the Joint Forces Commander. The UAVs are equipped with electro-optical and Synthetic Aperture Radar (SAR), and other sensors to perform their mission. The systems being developed and procured are: Tactical UAV (Shadow); Medium Altitude Endurance UAV (Predator); High Altitude Endurance UAV (Global Hawk); and Combat UAV (J-UCAS). Contractors: Shadow (AAI Corporation, Hunt Valley, MD), Predator (General Atomics, Rancho Bernardo, CA), and Global Hawk (Northrop Grumman Ryan, Palmdale, CA)

Mission: The purpose of airborne reconnaissance UAVs is to collect and transmit intelligence information to the combat forces. The function of the UAVs in an airborne reconnaissance environment is to transport sensor, information-processing, and communications systems to locations where the desired information can be collected, to provide an acceptable level of survivability throughout the mission, and to return for repeated use.

**Program Acquisition Costs
(\$ Millions)**

	<u>FY 2003</u>		<u>FY 2004</u>		<u>FY 2005</u>	
	<u>(Qty)</u>	<u>Amt</u>	<u>(Qty)</u>	<u>Amt</u>	<u>(Qty)</u>	<u>Amt</u>
Procurement						
Global Hawk (AF)	(3)	181.1	(4)	251.0	(4)	359.7
Predator (AF)	(25)	139.2	(16)	210.1	(9)	146.6
Shadow (Army)	(9)	143.0	(8)	74.0	(4)	42.0
UUV (Navy)		-		-		61.0
Subtotal		<u>463.3</u>		<u>535.1</u>		<u>609.3</u>
RDT&E						
Global Hawk (AF)		337.7		360.2		336.2
Global Hawk (Navy)		188.4		75.1		-
Broad Area Maritime (Navy)		-		25.1		113.4
Predator (AF)		15.0		41.2		81.3
Shadow (Army)		44.3		11.7		14.3
Fire Scout (Navy)		39.3		36.1		42.9
J-UCAS		-		-		710.4
UCAV (AF/Navy/DARPA)		54.2		175.5		-
UUV (Navy)		<u>69.2</u>		<u>80.5</u>		<u>65.6</u>
Subtotal		<u>748.1</u>		<u>805.4</u>		<u>1,364.1</u>
TOTAL		1,211.4		1,340.5		1,973.4

**AIRCRAFT PROGRAMS
DOD-WIDE/JOINT**

V-22 OSPREY

Description: The V-22 Osprey is a tilt-rotor, vertical takeoff and landing aircraft designed to meet the amphibious/vertical assault needs of the Marine Corps, long range special operations forces (SOF) missions for USSOCOM, and the strike rescue needs of the Navy. The aircraft will be capable of flying 2,100 miles with one refueling, giving the services the advantage of a V/STOL aircraft that could rapidly self-deploy to any location in the world. Procurement objective is 458 (360 MV-22 aircraft for the Marine Corps; 50 CV-22 aircraft for USSOCOM; and 48 HV-22 aircraft for the Navy). The MV-22 will replace the CH-46E and CH-53D helicopters. The contractors include Textron, Inc., Bell Helicopter Division, Fort Worth, TX and Boeing Vertol, Philadelphia, PA.

Mission: The V-22 mission includes airborne assault, vertical lift, combat search and rescue, and special operations.

**Program Acquisition Costs
(\$ Millions)**

	<u>FY 2003</u>		<u>FY 2004</u>		<u>FY 2005</u>	
	<u>(Qty)</u>	<u>Amt</u>	<u>(Qty)</u>	<u>Amt</u>	<u>(Qty)</u>	<u>Amt</u>
Procurement						
MV-22 (USMC)	(11)	1,055.8	(9)	865.7	(8)	918.1
CV-22 (AF)		110.6	(2)	337.6	(3)	443.0
Subtotal		<u>1,166.4</u>		<u>1,203.3</u>		<u>1,361.1</u>
RDT&E		<u>444.1</u>		<u>505.4</u>		<u>395.4</u>
TOTAL		1,610.5		1,708.7		1,756.5

MUNITIONS PROGRAMS
ARMY

HIGH MOBILITY ARTILLERY ROCKET SYSTEM (HIMARS)

Description: The High Mobility Artillery Rocket System (HIMARS) consists of a C-130 transportable, wheeled, indirect fire, rocket/missile system capable of firing all rockets and missiles in the current and future Multiple Launch Rocket System (MLRS) family of munitions. Previous variants of MLRS launchers have been cancelled in favor of HIMARS. The prime contractor is Lockheed Martin Missiles and Fire Control, Dallas, TX. The FY 2005 budget continues procurement of HIMARS Launchers and Guided MLRS Rockets, and provides for continued upgrade development of each.

Mission: To neutralize or suppress enemy field artillery and air defense systems and supplement cannon artillery fires.

Program Acquisition Costs
(\$ Millions)

	<u>FY 2003</u>		<u>FY 2004</u>		<u>FY 2005</u>	
	<u>(Qty)</u>	<u>Amt</u>	<u>(Qty)</u>	<u>Amt</u>	<u>(Qty)</u>	<u>Amt</u>
Procurement						
Rockets	(822)	130.5	(786)	107.0	(1,026)	112.3
Launchers	(28)	133.6	(24)	123.3	(37)	169.2
Subtotal	(850)	264.1	(810)	230.3	(1,063)	281.5
RDT&E		<u>94.6</u>		<u>83.9</u>		<u>97.4</u>
TOTAL		358.7		314.2		378.9

**MUNITIONS PROGRAMS
ARMY**

JAVELIN ADVANCED ANTI-TANK WEAPON SYSTEM-MEDIUM (AAWS-M)

Description: The Javelin Advanced Anti-tank Weapon System-Medium is a man-portable fire and forget weapon system used against tanks with conventional and reactive armor. Special features of Javelin are the choice of top attack or direct fire mode, integrated day/night sight, soft launch permitting fire from enclosures, and imaging infrared seeker. Procurement funds buy missiles, Command Launch Units (CLU) and training devices. The prime contractor is the Raytheon TI and Lockheed Martin Javelin Joint Venture at Tucson, AZ and Orlando, FL. The FY 2005 budget continues production.

Mission: To defeat armored targets.

**Program Acquisition Costs
(\$ Millions)**

	<u>FY 2003</u>		<u>FY 2004</u>		<u>FY 2005</u>	
	<u>(Qty)</u>	<u>Amt</u>	<u>(Qty)</u>	<u>Amt</u>	<u>(Qty)</u>	<u>Amt</u>
Procurement	(1,478)	221.7	(901)	139.7	(1,038)	117.8
RDT&E		<u>0.5</u>		<u>0.9</u>		<u>0.9</u>
TOTAL		222.2		140.6		118.7

**MUNITIONS PROGRAMS
NAVY**

EVOLVED SEASPARROW MISSILE (ESSM)

Description: The Evolved Seasparrow Missile (ESSM) is an improved version of the NATO Seasparrow missile, designed for ship self-defense. The prime contractor is Raytheon Corporation, Tucson, AZ. The FY 2005 budget continues production.

Mission: The mission of the ESSM is to provide a missile with performance to defeat current and projected threats that possess low altitude, high velocity and maneuver characteristics beyond the engagement capabilities of other ship self-defense systems.

**Program Acquisition Costs
(\$ Millions)**

	<u>FY 2003</u>		<u>FY 2004</u>		<u>FY 2005</u>	
	<u>(Qty)</u>	<u>Amt</u>	<u>(Qty)</u>	<u>Amt</u>	<u>(Qty)</u>	<u>Amt</u>
Procurement	(23)	42.0	(82)	102.0	(71)	80.3

**MUNITIONS PROGRAMS
NAVY**

ROLLING AIRFRAME MISSILE (RAM)

Description: The Rolling Airframe Missile (RAM) is a high firepower, lightweight complementary self-defense system to engage anti-ship cruise missiles. The prime contractor is Raytheon Corporation, Tucson, AZ. The FY 2005 budget continues production.

Mission: The mission of the RAM is to provide high firepower close-in defense of combatant and auxiliary ships by utilizing a dual mode, passive radio frequency/infrared missile in a compact 21 cell launcher.

**Program Acquisition Costs
(\$ Millions)**

	<u>FY 2003</u>		<u>FY 2004</u>		<u>FY 2005</u>	
	<u>(Qty)</u>	<u>Amt</u>	<u>(Qty)</u>	<u>Amt</u>	<u>(Qty)</u>	<u>Amt</u>
Procurement	(106)	59.2	(90)	48.0	(90)	47.4

**MUNITIONS PROGRAMS
NAVY**

STANDARD MISSILE

Description: The STANDARD missile family consists of various air defense missiles including supersonic, medium and extended range, surface-to-air and surface-to-surface missiles. The prime contractor is Raytheon Corporation, Tucson, AZ. The FY 2005 budget continues production for the SM-3 variant, and continues development of a follow-on SM-6 variant.

Mission: The mission of the STANDARD missile family is to provide all-weather, anti-aircraft and surface-to-surface armament for cruisers, destroyers and guided missile frigates.

**Program Acquisition Costs
(\$ Millions)**

	<u>FY 2003</u>		<u>FY 2004</u>		<u>FY 2005</u>	
	<u>(Qty)</u>	<u>Amt</u>	<u>(Qty)</u>	<u>Amt</u>	<u>(Qty)</u>	<u>Amt</u>
Procurement	(93)	151.4	(75)	147.2	(75)	150.1
RDT&E		<u>24.2</u>		<u>81.0</u>		<u>99.0</u>
TOTAL		175.6		228.2		249.1

**MUNITIONS PROGRAMS
NAVY**

TACTICAL TOMAHAWK CRUISE MISSILE

Description: The Tactical Tomahawk cruise missile weapon system is a long-range conventional warhead system which is sized to fit torpedo tubes and capable of being deployed from a variety of surface ship and submarine platforms. The prime contractor is Raytheon, Tucson, AZ. FY 2005 continues production.

Mission: The mission of the TOMAHAWK is to provide a long-range cruise missile launched from a variety of platforms against land and sea targets.

**Program Acquisition Costs
(\$ Millions)**

	<u>FY 2003</u>		<u>FY 2004</u>		<u>FY 2005</u>	
	<u>(Qty)</u>	<u>Amt</u>	<u>(Qty)</u>	<u>Amt</u>	<u>(Qty)</u>	<u>Amt</u>
Procurement	(350)	437.1	(350)	352.6	(293)	256.2
RDT&E		<u>97.3</u>		<u>76.5</u>		<u>28.8</u>
TOTAL		534.4		429.1		285.0

**MUNITIONS PROGRAMS
NAVY**

TRIDENT II

Description: The TRIDENT II (D-5) is a submarine launched ballistic missile with greater range, payload capability and accuracy than the TRIDENT I. The major contractor is Lockheed Martin Missiles and Space Company, Sunnyvale, CA. The FY 2005 budget continues production.

Mission: The mission of the TRIDENT II is to deter nuclear war by means of assured retaliation in response to a major attack on the U.S. and to enhance nuclear stability by providing no incentive for enemy first strike.

**Program Acquisition Costs
(\$ Millions)**

	<u>FY 2003</u>		<u>FY 2004</u>		<u>FY 2005</u>	
	<u>(Qty)</u>	<u>Amt</u>	<u>(Qty)</u>	<u>Amt</u>	<u>(Qty)</u>	<u>Amt</u>
Procurement	(12)	573.0	(12)	645.4	(5)	768.6
RDT&E		<u>38.1</u>		<u>65.5</u>		<u>108.8</u>
TOTAL		611.1		710.9		877.4

**MUNITIONS PROGRAMS
AIR FORCE**

SENSOR FUZED WEAPON (SFW)

Description: The Sensor Fuzed Weapon (CBU-97/B) is a cluster munition designed for direct attack against armored targets. The SFW is manufactured by Textron Defense Systems, Wilmington, MA. The FY 2005 budget continues production.

Mission: The objective of the SFW is to develop and produce a conventional munition capable of multiple kills per pass against operating armored vehicles, air defense units, and other support vehicles.

**Program Acquisition Costs
(\$ Millions)**

	<u>FY 2003</u>		<u>FY 2004</u>		<u>FY 2005</u>	
	<u>(Qty)</u>	<u>Amt</u>	<u>(Qty)</u>	<u>Amt</u>	<u>(Qty)</u>	<u>Amt</u>
Procurement	(310)	124.1	(320)	117.0	(315)	117.0

**MUNITIONS PROGRAMS
AIR FORCE**

WIND CORRECTED MUNITIONS DISPENSER (WCMD)

Description: The Wind Corrected Munitions Dispenser (WCMD) guidance kit for the Combined Effects Munition, Gator Mine, and Sensor Fuzed Weapon provides inertial navigation to correct for the effects of wind transients and ballistic errors caused by wind when these munitions are released from medium to high altitudes. The contractor is Lockheed-Martin, Orlando, Florida. The FY 2005 budget continues production as well as development of an extended range variant of WCMD to provide standoff range for the above munitions.

Mission: The objective of the WCMD is to improve the war-fighting effectiveness of both bombers and fighters.

**Program Acquisition Costs
(\$ Millions)**

	<u>FY 2003</u>		<u>FY 2004</u>		<u>FY 2005</u>	
	<u>(Qty)</u>	<u>Amt</u>	<u>(Qty)</u>	<u>Amt</u>	<u>(Qty)</u>	<u>Amt</u>
Procurement	(3,262)	94.6	(3,715)	71.9	(2,507)	58.7
RDT&E		<u>3.4</u>		<u>17.5</u>		<u>28.0</u>
TOTAL		98.0		89.4		86.7

**MUNITIONS PROGRAMS
DOD-WIDE/JOINT**

AIR INTERCEPT MISSILE – 9X (AIM-9X)

Description: The AIM-9X short range air-to-air missile provides a launch and leave, air combat missile that uses passive infrared energy for acquisition and tracking of enemy aircraft.. AIM-9X is a joint Navy/Air Force program led by the Navy. The prime contractor is Raytheon Corporation, Tucson, AZ. The FY 2005 budget continues production.

Mission: The mission of the AIM-9X is to destroy low and high altitude, high-speed enemy targets in an electronic countermeasures environment.

**Program Acquisition Costs
(\$ Millions)**

	<u>FY 2003</u>		<u>FY 2004</u>		<u>FY 2005</u>	
	<u>(Qty)</u>	<u>Amt</u>	<u>(Qty)</u>	<u>Amt</u>	<u>(Qty)</u>	<u>Amt</u>
Procurement						
Air Force	(286)	55.9	(253)	53.2	(248)	52.6
Navy	<u>(284)</u>	<u>52.0</u>	<u>(102)</u>	<u>25.6</u>	<u>(157)</u>	<u>35.2</u>
Subtotal	(570)	107.9	(355)	78.8	(405)	87.8
RDT&E						
Air Force		2.8		0.4		5.6
Navy		<u>2.8</u>		<u>2.2</u>		<u>4.1</u>
Subtotal		<u>5.6</u>		<u>2.6</u>		<u>9.7</u>
TOTAL		113.5		81.4		97.5

**MUNITIONS PROGRAMS
DOD-WIDE/JOINT**

ADVANCED MEDIUM RANGE AIR-TO-AIR MISSILE (AMRAAM)

Description: The Advanced Medium Range Air-to-Air Missile (AMRAAM) is an all-weather, all-environment radar guided missile developed to improve capabilities against very low-altitude and high-altitude, high-speed targets in an electronic countermeasures environment. AMRAAM is a joint Navy/Air Force program led by the Air Force. The prime contractor is Raytheon Corporation, Tucson, AZ. The FY 2005 budget continues production, as well as upgrade developments.

Mission: The mission of the AMRAAM is to destroy low and high altitude, high-speed enemy targets in an electronic countermeasures environment.

**Program Acquisition Costs
(\$ Millions)**

	<u>FY 2003</u>		<u>FY 2004</u>		<u>FY 2005</u>	
	<u>(Qty)</u>	<u>Amt</u>	<u>(Qty)</u>	<u>Amt</u>	<u>(Qty)</u>	<u>Amt</u>
Procurement						
Air Force	(158)	84.9	(201)	104.5	(202)	107.4
Navy	<u>(76)</u>	<u>50.5</u>	<u>(42)</u>	<u>37.4</u>	<u>(46)</u>	<u>33.9</u>
Subtotal	(234)	135.4	(243)	141.9	(248)	141.3
RDT&E						
Air Force		39.3		32.2		33.3
Navy		<u>7.7</u>		<u>9.0</u>		<u>9.1</u>
Subtotal		<u>47.0</u>		<u>41.2</u>		<u>42.4</u>
TOTAL		182.4		183.1		183.7

**MUNITIONS PROGRAMS
DOD-WIDE/JOINT**

JOINT AIR-TO-SURFACE STANDOFF MISSILE (JASSM)

Description: The Joint Air-to-Surface Standoff Missile (JASSM) is a joint Air Force and Navy program led by the Air Force to provide a conventional precision guided, long range standoff cruise missile that can be delivered from both fighters and bombers. Lockheed Martin Integrated Systems, Inc., Orlando, FL is the prime contractor. The FY 2005 budget continues production as well as development of an extended range JASSM.

Mission: The mission of the JASSM is to destroy targets from a long-range standoff position deliverable by both fighters and bombers.

Program Acquisition Cost (\$ Millions)							
		<u>FY 2003</u>		<u>FY 2004</u>		<u>FY 2005</u>	
		<u>(Qty)</u>	<u>Amt</u>	<u>(Qty)</u>	<u>Amt</u>	<u>(Qty)</u>	<u>Amt</u>
Procurement							
Air Force		(100)	53.8	(240)	100.9	(360)	148.2
RDT&E							
Air Force			48.6		25.5		45.8
Navy			<u>16.1</u>		<u>20.9</u>		<u>27.0</u>
Subtotal			<u>64.7</u>		<u>46.4</u>		<u>72.8</u>
TOTAL			118.5		147.3		221.0

**MUNITIONS PROGRAMS
DOD-WIDE/JOINT**

JOINT DIRECT ATTACK MUNITION

Description: The Joint Direct Attack Munition (JDAM) program is a joint Air Force/Navy program led by the Air Force. The JDAM improves the existing inventory of MK82, MK83, MK84, and BLU-109 weapons by integrating a Global Positioning System (GPS) / inertial navigation guidance capability that improves accuracy and adverse weather capability. The prime contractor is Boeing, St. Louis, MO. The FY 2005 budget continues production.

Mission: This program enhances DoD conventional strike system capabilities by providing the ability to precisely attack time-critical, high value fixed, relocatable or maritime targets under adverse environmental conditions and from all altitudes.

**Program Acquisition Costs
(\$ Millions)**

	<u>FY 2003</u>		<u>FY 2004</u>		<u>FY 2005</u>	
	<u>(Qty)</u>	<u>Amt</u>	<u>(Qty)</u>	<u>Amt</u>	<u>(Qty)</u>	<u>Amt</u>
Procurement						
Air Force	(23,340)	477.1	(20,244)	424.6	(23,137)	521.8
Navy	<u>(12,280)</u>	<u>275.2</u>	<u>(12,326)</u>	<u>275.3</u>	<u>(6,620)</u>	<u>151.2</u>
Subtotal	(35,620)	752.3	(32,570)	699.9	(29,757)	673.0
RDT&E						
Air Force		17.0		35.2		-
Navy		<u>46.9</u>		<u>-</u>		<u>-</u>
Subtotal		<u>63.9</u>		<u>35.2</u>		<u>-</u>
TOTAL		816.2		735.1		673.0

**MUNITIONS PROGRAMS
DOD-WIDE/JOINT**

JOINT STANDOFF WEAPON (JSOW)

Description: The Joint Standoff Weapon (JSOW - AGM-154) program is a joint weapon providing day, night and adverse weather environment munition capability. The JSOW consists of two variants. The JSOW baseline (BLU-97 Submunition) provides a day, night, and all-weather environment submunition for soft and area targets. The JSOW Unitary incorporates the dual-stage Broach penetrating warhead with terminal accuracy via Automatic Target Acquisition Seeker Technology. The prime contractor is Raytheon Missile Systems Corp., Tucson, AZ. The FY 2005 budget request continues production for the Navy only. The Air Force will terminate production of JSOW in favor of other weapons to meet the requirement.

Mission: JSOW is a primary standoff precision guided munition. The day/night, adverse weather capability provides continuous munitions operations from a survivable standoff range.

**Program Acquisition Costs
(\$ Millions)**

	<u>FY 2003</u>		<u>FY 2004</u>		<u>FY 2005</u>	
	<u>(Qty)</u>	<u>Amt</u>	<u>(Qty)</u>	<u>Amt</u>	<u>(Qty)</u>	<u>Amt</u>
Procurement						
Air Force	(22)	12.2	(307)	79.4	-	-
Navy	<u>(532)</u>	<u>159.6</u>	<u>(328)</u>	<u>117.6</u>	<u>(389)</u>	<u>139.4</u>
Subtotal	<u>(554)</u>	<u>171.8</u>	<u>(635)</u>	<u>197.0</u>	<u>(389)</u>	<u>139.4</u>
RDT&E, Navy		<u>16.7</u>		<u>5.0</u>		<u>9.5</u>
TOTAL		188.5		202.0		148.9

**MUNITIONS PROGRAMS
DOD-WIDE/JOINT**

SMALL DIAMETER BOMB (SDB)

Description: The Small Diameter Bomb (SDB) is a joint Air Force and Navy program led by the Air Force to provide a conventional small sized, precision guided, standoff air-to-ground weapon that can be delivered from both fighters and bombers. Boeing Corporation of St. Charles, MO is the prime contractor. The FY 2005 budget begins production for the Air Force as well as follow-on development and beginning development for integration on Navy aircraft.

Mission: The mission of the SDB is to destroy targets from a medium-range standoff position deliverable by both fighters and bombers, with higher loadout and less collateral damage compared to other weapons.

**Program Acquisition Cost
(\$ Millions)**

	<u>FY 2003</u>		<u>FY 2004</u>		<u>FY 2005</u>	
	<u>(Qty)</u>	<u>Amt</u>	<u>(Qty)</u>	<u>Amt</u>	<u>(Qty)</u>	<u>Amt</u>
Procurement, Air Force		-		-	(158)	29.3
RDT&E						
Air Force		56.3		125.4		76.5
Navy		-		-		10.0
Subtotal		<u>56.3</u>		<u>125.4</u>		<u>86.5</u>
TOTAL		56.3		125.4		115.8

VESSEL PROGRAMS NAVY

CARRIER REPLACEMENT PROGRAM

Description: The Carrier Replacement Program provides for the new construction of aircraft carriers. Currently, there are twelve active carriers in the Navy's fleet. Eight of these are Nimitz class carriers. The last Nimitz Class carrier, CVN-77, was awarded to Newport News Shipbuilding in January 2001 and is scheduled to deliver in March 2008. CVN-77 will also serve as the "bridge" platform for technologies that will enable the Navy to transition from the Nimitz class to the next generation aircraft carrier (CVN-21). CVN-21 will include new technologies such as an integrated topside island which includes a new multi-function radar and propulsion plant, monitoring improvements, manpower reduction technologies, flight deck enhancements for greater sortie generation rates, and advanced arresting gear. The FY 2005 budget includes funding for procurement of long-lead items and advance planning to support construction of CVN-21, scheduled to begin in FY 2007.

Mission: Nuclear Aircraft Carriers support and operate aircraft to engage in attacks on targets afloat and ashore which threaten our use of the sea and to engage in sustained operations in support of other forces.

Program Acquisition Costs (\$ Millions)

	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>
	<u>(Qty)</u> <u>Amt</u>	<u>(Qty)</u> <u>Amt</u>	<u>(Qty)</u> <u>Amt</u>
Procurement	483.7	1,177.2	626.1
RDT&E	<u>365.6</u>	<u>338.9</u>	<u>352.8</u>
TOTAL	849.3	1,516.1	978.9

VESSEL PROGRAMS NAVY

DD(X) DESTROYER

Description: DD(X) will be an optimally crewed, multi-mission surface combatant designed to fulfill volume firepower and precision strike requirements. Armed with an array of weapons, DD(X) will provide offensive, distributed and precision firepower at long ranges in support of forces ashore. To ensure effective operations in the littoral, DD(X) will incorporate full-spectrum signature reduction, active and passive self-defense systems and cutting-edge survivability features. The Navy plans to incorporate technologies developed under the DD(X) program into the entire family of new surface combatants, which include the CG(X) and the Littoral Combat Ship (LCS).

Construction of the first DD(X) is scheduled to begin in FY 2005 and is funded with Research, Development, Test and Evaluation funds.

Mission: DD(X) will provide independent forward presence and deterrence, advanced land attack capability in support of the ground campaign, and contribute to naval, joint or combined battle space dominance in littoral operations. DD(X) will establish and maintain surface and sub-surface superiority and provide local air defense.

Program Acquisition Costs (\$ Millions)

	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>
	<u>(Qty)</u> <u>Amt</u>	<u>(Qty)</u> <u>Amt</u>	<u>(Qty)</u> <u>Amt</u>
RDT&E	916.3	1,088.9	(1) 1,450.6

VESSEL PROGRAMS NAVY

DDG-51 AEGIS DESTROYER

Description: The ARLEIGH BURKE Flight IIA Class Guided Missile Destroyer is 471 feet long and displaces 9,300 tons (full load). It is armed with a Vertical Launching System accommodating 96 missiles, including TOMAHAWK, SM-2 and ASROC. Prime features include the SPY-1D and SPS-67(V)3 radars, SQS-53C sonar, three MK-99 illuminators, 5"/54 rapid fire gun with SEAFIRE fire control system, SLQ-32 Electronic Warfare System and decoy launchers, and 6 torpedo tubes in 2 triple mounts. The ship also carries two LAMPS (Light Airborne Multi-Purpose System) Mk III helicopters. The DDG-51 is powered by four General Electric LM2500 gas turbines, which can drive the ship in excess of 31 knots. The lead ship was awarded to Bath Iron Works, Bath, ME in FY 1985. Ingalls Shipbuilding Division of Pascagoula, MS has also been awarded contracts for follow-on ships. The FY 2005 budget supports the continuation of the FY 2002-2005 multi-year procurement of 10 DDG-51 ships. The ships acquired under the current multi-year contract are equipped with additional war-fighting upgrades, including CEC, SPY-ID (V), ESSM, 5"/62 Gun, SQQ-89 (V)15 and SLQ-32.

Mission: The DDG-51 Class ships operate defensively and offensively as units of Carrier Battle Groups and Surface Action Groups, in support of Underway Replenishment Groups and the Marine Amphibious Task Force in multi-threat environments that include air, surface, and subsurface threats.

Program Acquisition Costs (\$ Millions)

	<u>FY 2003</u>		<u>FY 2004</u>		<u>FY 2005</u>	
	<u>(Qty)</u>	<u>Amt</u>	<u>(Qty)</u>	<u>Amt</u>	<u>(Qty)</u>	<u>Amt</u>
Procurement	(2)	2,681.2	(3)	3,193.0	(3)	3,445.0
RDT&E		<u>331.2</u>		<u>213.5</u>		<u>146.5</u>
TOTAL		3,012.4		3,406.5		3,591.5

(* Note: RDT&E estimates reflect funds to continue development of modifications and upgrades to the AEGIS combat weapons system for DDG-51 class destroyers and CG47 class cruisers.)

VESSEL PROGRAMS NAVY

LITTORAL COMBAT SHIP

Description: The Littoral Combat Ship (LCS) is to be a fast, agile, and stealthy surface combatant capable of operating in support of anti-access missions against asymmetric threats in the littorals. It will be the first Navy ship to separate capability from hull form and provide a robust, affordable, focused-mission warship to enhance the Navy's ability to establish sea superiority. A networked, lethal, small, fast, stealthy, and highly maneuverable ship, LCS will be capable of employing manned and unmanned mission modules to counter some of the most challenging anti-access threats our naval forces may encounter close to shore—mines, quiet diesel submarines and swarming small boats.

Construction of the first ship will begin in FY 2005 and is funded with Research, Development, Test and Evaluation, Navy funds.

Mission: Primary missions include prosecution of small boats, mine counter-measures, littoral anti-submarine warfare (ASW). Secondary missions include: intelligence, surveillance and reconnaissance.

Program Acquisition Costs (\$ Millions)

	<u>FY 2003</u>		<u>FY 2004</u>		<u>FY 2005</u>	
	<u>(Qty)</u>	<u>Amt</u>	<u>(Qty)</u>	<u>Amt</u>	<u>(Qty)</u>	<u>Amt</u>
RDT&E		35.3		166.2	(1)	352.1

**VESSEL PROGRAMS
NAVY**

LPD-17 SAN ANTONIO CLASS AMPHIBIOUS TRANSPORT DOCK

Description: The SAN ANTONIO Class Amphibious Transport Dock ships are functional replacements for 41 ships of four classes of amphibious ships. The LPD-17 design includes systems configurations that reduce operating and support costs and facilitate operational performance improvements. System engineering and integration efforts have developed further reductions in life cycle costs and integrated performance upgrades in a rapid, affordable manner. Improvements include composite masts, advanced sensors, advanced computers, advanced command and control software, advanced information systems technologies, and ship based logistics concepts. The contractor is Northrop Grumman Ship Systems. The FY 2005 budget continues production.

Mission: The LPD-17 class ships embark, transport, and land elements of Marine landing forces in an amphibious assault by helicopters, landing craft, and amphibious vehicles. As tactics, techniques, and tools for naval expeditionary warfare continue to evolve, the LPD-17 class configuration must have the flexibility to respond to this evolutionary process, since these ships are expected to be in service until almost 2050.

**Program Acquisition Costs
(\$ Millions)**

	<u>FY 2003</u>		<u>FY 2004</u>		<u>FY 2005</u>	
	<u>(Qty)</u>	<u>Amt</u>	<u>(Qty)</u>	<u>Amt</u>	<u>(Qty)</u>	<u>Amt</u>
Procurement	(1)	584.4	(1)	1,316.6	(1)	966.6
RDT&E		<u>9.6</u>		<u>8.9</u>		<u>9.0</u>
TOTAL		594.0		1,325.5		975.6

**VESSEL PROGRAMS
NAVY**

VIRGINIA CLASS SUBMARINE

Description: The Virginia class is the next-generation of attack submarines and will provide the Navy with the capabilities to maintain undersea supremacy into the 21st century. Virginia class submarines are able to attack targets ashore with Tomahawk cruise missiles and conduct covert long-term surveillance of land areas, littoral waters or other sea-based forces. Five submarines are under contract with the lead ship scheduled to deliver in June 2004. The Navy is scheduled to award a 5-ship multiyear procurement contract for the sixth through tenth submarine in the second quarter of FY 2004. The contractors are Electric Boat Division of General Dynamics, Groton, CT and Newport News Shipbuilding, Newport News, VA.

Mission: The Virginia class operational missions will include: surveillance, strike warfare, mine countermeasures, and anti-submarine warfare.

**Program Acquisition Costs
(\$ Millions)**

	<u>FY 2003</u>		<u>FY 2004</u>		<u>FY 2005</u>	
	<u>(Qty)</u>	<u>Amt</u>	<u>(Qty)</u>	<u>Amt</u>	<u>(Qty)</u>	<u>Amt</u>
Procurement	(1)	2,100.8	(1)	2,369.7	(1)	2,453.0
RDT&E		<u>234.6</u>		<u>144.6</u>		<u>143.3</u>
TOTAL		2,335.4		2,514.3		2,596.3

**VESSEL PROGRAMS
NAVY**

CVN Refueling Complex Overhaul (RCOH)

Description: The CVN Refueling Complex Overhaul program is a program to refuel and upgrade Nimitz class aircraft carriers at about its mid-life of 25 years. The refueling and upgrades will provide for reliable operations during its remaining ship life using only the normal maintenance cycle.

The CVN-70, USS Carl Vinson, will begin its RCOH in FY 2006 at Northrop Grumman Newport News Shipbuilding. Funds budgeted prior to FY 2006 are for advance planning efforts and to procure long-lead materials and equipment.

Mission: Nuclear aircraft carriers support and operate aircraft to engage in attacks on targets afloat and ashore which threaten our use of the sea and to engage in sustained operations in support of other forces.

**Program Acquisition Costs
(\$ Millions)**

	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>
	<u>(Qty)</u> <u>Amt</u>	<u>(Qty)</u> <u>Amt</u>	<u>(Qty)</u> <u>Amt</u>
Procurement	217.3	221.0	333.1

**VESSEL PROGRAMS
NAVY**

SSGN Conversions

Description: The SSGN program includes the conversion of four SSBG Trident submarines to SSGN cruise missile submarines with a capability to carry more than 150 Tomahawk missiles and a large contingent of Special Operation Forces (SOF). The Norfolk and Puget Sound naval shipyards are refueling the submarines. Electric Boat Division of General Dynamics, Groton, CT is designing and building the conversion kits and serving as the conversion manager. The FY 2005 budget continues the conversion program.

Mission: SSGN submarines will provide covert striking power against targets ashore and the capability to establish covertly an expeditionary force on land.

**Program Acquisition Costs
(\$ Millions)**

	<u>FY 2003</u>		<u>FY 2004</u>		<u>FY 2005</u>	
	<u>(Qty)</u>	<u>Amt</u>	<u>(Qty)</u>	<u>Amt</u>	<u>(Qty)</u>	<u>Amt</u>
Procurement						
(SCN)	(2)	995.7	(1)	1,158.1	(1)	517.2
(Reactor – OPN)		108.5		-		121.2
Subtotal		<u>1,104.2</u>		<u>1,158.1</u>		<u>638.4</u>
RDT&E, Navy		<u>79.1</u>		<u>69.4</u>		<u>20.0</u>
TOTAL		1,183.3		1,227.5		658.4

**VESSEL PROGRAMS
NAVY**

LEWIS AND CLARK CLASS (T-AKE) AUXILIARY DRY CARGO SHIP

Description: The T-AKE will replace the aging fleet of refrigerated cargo and food stores ships (designated AFS Class) and ammunition ships (designated AE Class) in the Navy's Combat Logistics Force. The first four ships were awarded to National Steel and Shipbuilding Company (NASSCO) San Diego, CA with the lead ship scheduled to deliver in May 2005.

Mission: The T-AKE class ships will provide a steady stream of ammunition, spare parts and provisions (dry, refrigerated and frozen) to naval forces at sea in its role as a shuttle ship.

**Program Acquisition Costs
(\$ Millions)**

	<u>FY 2003</u>		<u>FY 2004</u>		<u>FY 2005</u>	
	<u>(Qty)</u>	<u>Amt</u>	<u>(Qty)</u>	<u>Amt</u>	<u>(Qty)</u>	<u>Amt</u>
Procurement	(1)	386.0	(2)	722.3	(2)	768.4

**COMBAT VEHICLES
ARMY**

FUTURE COMBAT SYSTEM (FCS)

Description: The FCS research and development program will develop network centric concepts for a multi-mission combat system that will be overwhelmingly lethal, strategically deployable, self-sustaining and highly survivable in combat through the use of an ensemble of manned and unmanned ground and air platforms. The goal of the FCS program is to design such an ensemble that strikes an optimum balance between critical performance factors, including ground platform strategic, operational and tactical mobility; lethality; survivability; and sustainability. This system of systems design will be accomplished by using modeling, simulation and experimentation. The FCS unit will be capable of adjusting to a changing set of missions, ranging from war fighting to peacekeeping, as the deployment unfolds. The Lead System Integration (LSI) is Boeing.

Mission: The FCS program will develop network centric concepts for a multi-mission combat system that will be overwhelmingly lethal, strategically deployable, self-sustaining and highly survivable in combat through the use of an ensemble of manned and unmanned ground and air platforms. An FCS-equipped force will be capable of providing mobile-networked command, control, communication and computer (C4) capabilities; autonomous robotic systems; precision direct and indirect fires; organic sensor platforms; and adverse-weather reconnaissance, surveillance, targeting and acquisition.

**Program Acquisition Costs
(\$ Millions)**

	<u>FY 2003</u>		<u>FY 2004</u>		<u>FY 2005</u>	
	<u>(Qty)</u>	<u>Amt</u>	<u>(Qty)</u>	<u>Amt</u>	<u>(Qty)</u>	<u>Amt</u>
RDT&E		370.0		1,683.6		3,198.1

**TRACKED COMBAT VEHICLES
ARMY**

ABRAMS (M1) TANK UPGRADE PROGRAM

Description: This is the production program for the M1A2 System Enhancement Program (SEP) tank, the successor to the M1A2, which was the first fully digital ground combat system. Upgrades include improved armor, a 120mm gun, a Commander's Independent Thermal Viewer, an Improved Commander's Weapon Station, digitized communications and nuclear, biological and chemical protection. Beginning in FY 1999, the upgrades also include 2nd generation Forward Looking Infrared sensors, an under Armor Auxiliary power Unit and a Thermal Management System. The prime contractor is General Dynamics Land Systems of Sterling Heights, MI. The FY 2005 budget continues the upgrade program.

Mission: The mission of the M1 Upgrade program is to provide a main battle tank with increased survivability, mobility, firepower, and lethality for U.S. armor forces.

**Program Acquisition Costs
(\$ Millions)**

	<u>FY 2003</u>		<u>FY 2004</u>		<u>FY 2005</u>	
	<u>(Qty)</u>	<u>Amt</u>	<u>(Qty)</u>	<u>Amt</u>	<u>(Qty)</u>	<u>Amt</u>
Upgrade program		384.2		3.3		-
SEP Procurement	(7)	85.2	(34)	180.1	(67)	292.2
RDT&E		<u>81.7</u>		<u>24.5</u>		<u>16.1</u>
TOTAL		551.1		207.9		308.3

**TRACKED COMBAT VEHICLES
ARMY**

BRADLEY BASE SUSTAINMENT PROGRAM

Description: The Bradley Upgrade program continues to modernize the Bradley Fighting Vehicle fleet. The program includes upgrading first and second-generation Bradley vehicles to the current M2A2 (Operation Desert Storm) configuration as well as the M2A3 upgrade program that provides enhanced command and control, situational awareness, increased lethality and survivability and improved sustainability and supportability. The prime contractor is United Defense Limited Partnership (UDLP), San Jose, CA. The FY 2005 budget continues the Base Sustainment Program.

Mission: The mission of the Bradley upgrade program is to provide a fighting vehicle with enhanced command and control, situational awareness, lethality and sustainability.

**Program Acquisition Costs
(\$ Millions)**

	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>
	<u>(Qty)</u> <u>Amt</u>	<u>(Qty)</u> <u>Amt</u>	<u>(Qty)</u> <u>Amt</u>
Procurement	437.4	344.5	71.4

COMBAT VEHICLES ARMY

STRYKER FAMILY OF ARMORED VEHICLES

Description: Stryker is a full-time four-wheel drive, selective eight-wheel drive, armored vehicle weighing approximately 19 tons. It can reach speeds of 62 mph on the highway and has a maximum range of 312 miles. The vehicles have armor that protects its two-man crew and passengers from machine gun fire, mortar and artillery fragments. General Dynamics Land Systems, produces the Stryker light armored vehicle series.

Stryker configurations include Reconnaissance, Anti-Tank, Guided Missile, and Medical Evacuation vehicle variants, as well as carriers for Mortars, Engineering Squads, Command Groups, and Fire Support Teams. A Mobile Gun System variant consists of a General Dynamics Land System 105mm cannon mounted in a low-profile turret integrated into the General Motors LAV-III chassis. The FY 2005 budget continues production.

Mission: The Stryker program provides a medium weight fighting vehicle with enhanced mobility, lethality, survivability and sustainability to meet the Army's transformation strategy in support of the Army's new vision of full spectrum dominance and strategic mobility.

Program Acquisition Costs (\$ Millions)

	<u>FY 2003</u>		<u>FY 2004</u>		<u>FY 2005</u>	
	<u>(Qty)</u>	<u>Amt</u>	<u>(Qty)</u>	<u>Amt</u>	<u>(Qty)</u>	<u>Amt</u>
Procurement	(282)	780.1	(306)	982.7	(310)	905.1
RDT&E		<u>150.2</u>		<u>60.7</u>		<u>51.9</u>
TOTAL		930.3		1,043.4		957.0

**SPACE PROGRAMS
ARMY**

**DEFENSE SATELLITE COMMUNICATIONS SYSTEM (GROUND SYSTEMS)
(DSCS)**

Description: DSCS provides strategic military satellite terminals, baseband, satellite network, payload control systems, and related equipment required to satisfy long haul communications requirements of warfighters and Joint Chiefs of Staff (JCS)-validated command, control, communications, and intelligence requirements in support of the President and the Combatant Commanders. DSCS also provides reach-back capability to sanctuary for deployed forces (teleport and standard tactical entry point). DSCS provides the equipment US Army Space Command uses to perform its payload and network control mission on wideband satellites and provides an anti-jam and anti-scintillation capability for key strategic forces. The prime contractor is Lockheed Martin Corp., Sunnyvale CA. The FY 2005 budget continues production.

Mission: DSCS provides super-high-frequency beyond-line-of-sight communications and provides a critical conduit for intelligence information transfer to deployed forces worldwide.

**Program Acquisition Costs
(\$ Millions)**

	<u>FY 2003</u>		<u>FY 2004</u>		<u>FY 2005</u>	
	<u>(Qty)</u>	<u>Amt</u>	<u>(Qty)</u>	<u>Amt</u>	<u>(Qty)</u>	<u>Amt</u>
Procurement		93.5		98.2		99.8
RDT&E		<u>11.4</u>		<u>13.5</u>		<u>9.3</u>
TOTAL		104.9		111.7		109.1

**SPACE PROGRAMS
NAVY**

MOBILE USER OBJECTIVE SATELLITE SYSTEM (MUOS)

Description: The mobile USER Objective System (MUOS) is the next generation DoD advanced narrow band communications satellite constellation. Component Advanced Development (CAD) phase contracts were awarded in FY 2002 to teams led by Lockheed Martin Space Systems, Sunnyvale, California and Raytheon Corporation, St. Petersburg, Florida. Lockheed's principal sub-contractor is General Dynamics, Scottsdale, Arizona and Raytheon's principal sub-contractor is Space Systems Loral, Palo Alto, California. The first satellite launch is scheduled for FY 2009. The FY 2005 budget continues development.

Mission: This program satisfies narrow-band communications requirements

**Program Acquisition Costs
(\$ Millions)**

	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>
	<u>(Qty)</u> <u>Amt</u>	<u>(Qty)</u> <u>Amt</u>	<u>(Qty)</u> <u>Amt</u>
RDT&E	110.5	267.7	571.1

**SPACE PROGRAMS
AIR FORCE**

ADVANCED EXTREMELY HIGH FREQUENCY SATELLITE

Description: The Advanced Extremely High Frequency (AEHF) Satellite is a constellation of communications satellites that will replenish the existing EHF system (MILSTAR) at a much higher capacity and data rate capability. The AEHF constellation will provide survivable, anti-jam, worldwide secure communications for the strategic and tactical warfighter. The first satellite is expected to launch in 2007 aboard an intermediate sized variant of the Evolved Expendable Launch Vehicle (EELV). The prime contractors for the AEHF Program are Lockheed Martin Space Systems, Sunnyvale, California and Northrop Grumman, Redondo Beach, California. The FY 2005 budget continues satellite development.

Mission: The Advanced EHF Satellite will provide the Department with secure, survivable worldwide communications. It will support both strategic and tactical users and be backward compatible with the MILSTAR communication system.

**Program Acquisition Costs
(\$ Millions)**

	<u>FY 2003</u>		<u>FY 2004</u>		<u>FY 2005</u>	
	<u>(Qty)</u>	<u>Amt</u>	<u>(Qty)</u>	<u>Amt</u>	<u>(Qty)</u>	<u>Amt</u>
Procurement		-		-		98.6
RDT&E		<u>802.6</u>		<u>802.3</u>		<u>612.0</u>
TOTAL		802.6		802.3		710.6

**SPACE PROGRAMS
AIR FORCE**

DEFENSE SUPPORT PROGRAM (DSP)

Description: The Defense Support Program provides worldwide missile attack warning and surveillance. It specifically provides an early detection and warning of ballistic missiles and space launches during the boost phase. It is also capable of providing detection and reporting of nuclear detonations. A total of 23 DSP satellites have been procured, 2 of which remain to be launched over the next 2 years. DSP-19 was a launch failure in April 1999. DSP-22 will be launched with a Titan IV booster using an Inertial Upper Stage (IUS). DSP-23 will be launched with the heavy variant of the Evolved Expendable Launch Vehicle (EELV). The prime contractor for DSP is Northrop Grumman, Los Angeles, CA. Aerojet, Los Angeles, CA makes the primary sensor. The FY 2005 budget continues the program.

Mission: Improves the U.S. capability to detect and assess missile launches and detonations both in and outside of earth atmosphere.

**Program Acquisition Costs
(\$ Millions)**

	<u>FY 2003</u>		<u>FY 2004</u>		<u>FY 2005</u>	
	<u>(Qty)</u>	<u>Amt</u>	<u>(Qty)</u>	<u>Amt</u>	<u>(Qty)</u>	<u>Amt</u>
Procurement		105.7		112.1		116.5
RDT&E		<u>1.9</u>		<u>-</u>		<u>-</u>
TOTAL		107.6		112.1		116.5

**SPACE PROGRAMS
AIR FORCE**

EVOLVED EXPENDABLE LAUNCH VEHICLE (EELV)

Description: EELV will replace the current families of Delta, Atlas, and Titan expendable launch vehicles with a new, lower cost program for the acquisition of space launch services for FY 2002 and subsequent years. The goal of EELV is to reduce launch costs 25-50 percent over current systems by redesigning launch hardware and ground processing facilities and by introducing commercial business practices. The Air Force and two EELV contractors have shared the cost of developing EELV. EELV began the Demonstration and Validation (Dem/Val) phase in December 1996 and entered Engineering and Manufacturing Development (E&MD) in October 1998. The contractors, Boeing, Huntington Beach, California, and Lockheed Martin, Denver, Colorado will each develop and produce an EELV. Both EELV contractors conducted successful maiden launches in FY 2002. The FY 2005 budget continues production.

Mission: EELV provides the DoD, the NRO, and other government and commercial purchasers of launch services with low cost, highly reliable access to space for medium to heavy lift class of satellites.

**Program Acquisition Costs
(\$ Millions)**

	<u>FY 2003</u>		<u>FY 2004</u>		<u>FY 2005</u>	
	<u>(Qty)</u>	<u>Amt</u>	<u>(Qty)</u>	<u>Amt</u>	<u>(Qty)</u>	<u>Amt</u>
Procurement	(1)	175.6	(4)	604.8	(3)	611.0
RDT&E		<u>55.8</u>		<u>7.9</u>		<u>27.0</u>
TOTAL		231.4		612.7		638.0

**SPACE PROGRAMS
AIR FORCE**

MEDIUM LAUNCH VEHICLES (MLV)

Description: Provides for procurement and launch of Medium Launch Vehicles (MLVs) for use in launching medium weight satellites into orbit. The prime contractor for the Delta MLV is Boeing, Huntington Beach, California. The prime contractor for the Atlas MLV is Lockheed Martin, Denver, Colorado.

Mission: The Delta MLV launches NAVSTAR Global Positioning System satellites. The Atlas MLV launches National Reconnaissance Office payloads to orbit.

**Program Acquisition Costs
(\$ Millions)**

	<u>FY 2003</u>		<u>FY 2004</u>		<u>FY 2005</u>	
	<u>(Qty)</u>	<u>Amt</u>	<u>(Qty)</u>	<u>Amt</u>	<u>(Qty)</u>	<u>Amt</u>
Procurement		47.8		89.4		102.9

SPACE PROGRAMS AIR FORCE

NAVSTAR GLOBAL POSITIONING SYSTEM (NAVSTAR GPS)

Description: The NAVSTAR Global Positioning System (NAVSTAR GPS) provides a global, three-dimensional positioning, velocity and time information system for aircraft, artillery, ships, tanks and other weapons delivery systems. Boeing, Seal Beach, California, manufactured the 28 Block II/IIA satellites, the last of which was launched in November 1997. Prime contractor for the 21 Block IIR satellites is Lockheed Martin, Valley Forge, Pennsylvania. The first Block IIR satellite was launched in mid 1997. Boeing, Seal Beach, California, is manufacturing 6 Block IIF satellites awarded in FY 1997 and FY 1998. Ten additional Block IIF variant satellites will be procured in FY 2005 through FY 2008 with increased anti-jam capabilities. Block IIR satellites are launched with Delta Medium Launch Vehicle (MLV) boosters, and subsequent satellites will be launched with the Evolved Expendable Launch Vehicle (EELV). The fully operational GPS constellation consists of 24 satellites in orbit at all time.

The budget includes funds to modernize the GPS constellation. The last 8 Block IIR satellites will incorporate a second civil signal as well as a new military signal. All Block IIF satellites will include a second and third civil signal and the new military signal.

Mission: To provide a global system of satellites for navigation and position locating purposes.

Program Acquisition Costs (\$ Millions)

	<u>FY 2003</u>		<u>FY 2004</u>		<u>FY 2005</u>	
	<u>(Qty)</u>	<u>Amt</u>	<u>(Qty)</u>	<u>Amt</u>	<u>(Qty)</u>	<u>Amt</u>
Procurement		249.8		255.8	3	330.5
RDT&E		<u>364.5</u>		<u>244.2</u>		<u>252.4</u>
TOTAL		614.3		500.0		582.9

**SPACE PROGRAMS
AIR FORCE**

SPACE BASED INFRARED SYSTEM (SBIRS) - HIGH

Description: The SBIRS – High system will field a constellation of four satellites in geosynchronous orbit (GEO) and two satellites in highly elliptical orbit (HEO) to provide initial warning of a ballistic missile attack against the United States, its deployed forces, or its allies. SBIRS High will support National Missile Defense and will also be used to collect a variety of technical intelligence. The High segment, which will replace the Defense Support Program (DSP), entered Engineering and Manufacturing Development (E&MD) in October 1996. The first two GEO satellites and the two HEO satellites will be acquired with RDT&E appropriations. The third, fourth, and fifth GEO satellites will be funded with Procurement appropriations. SBIRS High will be launched with a medium variant Evolved Expendable Launch Vehicle (EELV). Lockheed Martin, Sunnyvale, California, is the prime contractor for SBIRS High. The first launch of SBIRS High is scheduled for FY 2007.

Mission: SBIRS High will use new technologies to enhance detection and improve reporting of strategic and tactical ballistic missile launches.

**Program Acquisition Costs
(\$ Millions)**

	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>
	<u>(Qty)</u> <u>Amt</u>	<u>(Qty)</u> <u>Amt</u>	<u>(Qty)</u> <u>Amt</u>
RDT&E			
	775.3	610.2	508.4

**SPACE PROGRAMS
AIR FORCE**

TITAN SPACE LAUNCH VEHICLES

Description: Provides for the procurement and launch of Titan IV boosters and the conversion of Titan II ICBMs into space launch vehicles. The Titan IV is used to launch the Department's heavier payloads and can accommodate either the Centaur upper stage or the Inertial Upper Stage (IUS). A total of 39 Titan IV boosters have been procured by the Air Force, only one of which remains to be launched over the next year. A total of 14 Titan IIs were modified for spacelift-all of which have launched. Lockheed Martin, Denver, Colorado is the prime contractor. Alliant, Salt Lake City, Utah makes the solid rocket motors. Aerojet, Sacramento, California makes the liquid rocket engines. Boeing, Seattle, WA manufactures the IUS.

Mission: Program provides the capability to launch critical DoD heavyweight operational payloads through FY 2004, with program closeout costs budgeted through FY 2007.

**Program Acquisition Costs
(\$ Millions)**

	<u>FY 2003</u>		<u>FY 2004</u>		<u>FY 2005</u>	
	<u>(Qty)</u>	<u>Amt</u>	<u>(Qty)</u>	<u>Amt</u>	<u>(Qty)</u>	<u>Amt</u>
Procurement		254.4		45.1		74.3

**SPACE PROGRAMS
AIR FORCE**

WIDEBAND GAPFILLER SATELLITE

Description: The Wideband Gapfiller Satellite (WGS) is a constellation of communications satellites that will provide the Department with high data rate satellite communications services. The program was conceived to augment the near term "bandwidth gap" in warfighter communication needs. The first satellite is expected to launch in 2005 with subsequent launches (5 total) occurring through 2010. The satellites will be launched with an intermediate sized variant of the Evolved Expendable Launch Vehicle (EELV). The prime contractor for the WGS Program is Boeing Space Systems, El Segundo, California. Principal subcontractors are Harris Corporation, Colorado Springs, Colorado, and ITT Industries, Colorado Springs, Colorado.

Mission: The Wideband Gapfiller Satellite system will augment the Department's Interim Wideband System consisting of the Defense Satellite Communications System (DSCS) and the Global Broadcast Service (GBS). Additionally, WGS will provide a new two-way Ka-band service.

**Program Acquisition Costs
(\$ Millions)**

	<u>FY 2003</u>		<u>FY 2004</u>		<u>FY 2005</u>	
	<u>(Qty)</u>	<u>Amt</u>	<u>(Qty)</u>	<u>Amt</u>	<u>(Qty)</u>	<u>Amt</u>
Procurement		186.7		21.8		40.3
RDT&E		<u>13.8</u>		<u>36.3</u>		<u>73.5</u>
TOTAL		200.5		58.1		113.8

OTHER PROGRAMS ARMY

FAMILY OF HEAVY TACTICAL VEHICLES (FHTV)

Description: The FHTV consists of the Palletized Load System (PLS), Heavy Equipment Transporter System (HETS) and Heavy Expanded Mobility Tactical Truck (HEMTT). The PLS consists of a 16.5-ton tactical vehicle composed of a truck (10x10 with central tire inflation system (CTIS)) with integral self load/ unload capability, 16.5-ton companion trailer and demountable cargo beds (flatracks). HETS consists of the M1070 tractor (8x8 w/CTIS) and the M1000 semitrailer (70-ton). The HEMTT is a 10-ton (8x8) which comes in five configurations (M977-Cargo w/Crane, M978-Fuel Tanker 2500 gallons, M983-Tractor, M9841A1-Wrecker, M985-Cargo w/Heavy Crane). The prime contractor is Oshkosh Truck Corporation of Oshkosh, WI.

Mission: PLS is a key transportation component of the Maneuver Ammunition Distribution System (MOADS). PLS is assigned to self-propelled artillery units, Forward Support Battalions, and selected ammunition and transportation companies. HETS provides the transportation and evacuation of the M1 Main Battle Tank. HEMTT provides resupply of combat vehicles, helicopter and missile systems in combat support units across all tactical mobility levels.

Program Acquisition Costs (\$ Millions)

	<u>FY 2003</u>		<u>FY 2004</u>		<u>FY 2005</u>	
	<u>(Qty)</u>	<u>Amt</u>	<u>(Qty)</u>	<u>Amt</u>	<u>(Qty)</u>	<u>Amt</u>
Procurement		258.0		217.5		84.0
RDT&E		<u>13.9</u>		<u>16.9</u>		<u>2.5</u>
TOTAL		271.9		234.4		86.5

OTHER PROGRAMS ARMY

FAMILY OF MEDIUM TACTICAL VEHICLES (FMTV)

Description: The FMTV is a family of diesel powered trucks in the 2 1/2 ton (4x4) and 5 ton (6x6) payload classes that will modernize and improve the existing medium-tactical wheeled vehicle fleet. This Non-Developmental Item (NDI) procurement capitalizes on current state of the art automotive technology including a diesel engine, automatic transmission, and central tire inflation system (CTIS). The FMTV consists of multiple body styles: cargo, wrecker, dump, tractor, airdrop, etc. The FMTV with its enhanced mobility, state of the art components, and logistics commonality between Light (4x4 LMTV) and Medium (6x6 MTV) will improve unit operational capabilities and reduce Operation and Support (O&S) costs. The prime contractor is Stewart and Stevenson, Inc. in Sealy, TX.

Mission: FMTV performs numerous unit mobility and unit resupply missions including the transport of equipment and personnel. FMTV's numerous models perform a wide variety of missions including cargo transport (cargo model), vehicle recovery operations (wrecker), construction (dump), line haul (tractor), and airdrop missions (Low Velocity Air Drop (LVAD) model). FMTVs support combat support and combat service support unit missions as well as civil disaster relief.

Program Acquisition Costs (\$ Millions)

	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>
	<u>(Qty)</u> <u>Amt</u>	<u>(Qty)</u> <u>Amt</u>	<u>(Qty)</u> <u>Amt</u>
Procurement	659.0	344.7	505.7

**OTHER PROGRAMS
ARMY**

HIGH MOBILITY MULTIPURPOSE WHEELED VEHICLE (HMMWV)

Description: The High Mobility Multipurpose Wheeled Vehicle (HMMWV) is a light, highly mobile, diesel powered air transportable and air dropable, 4-wheel drive tactical vehicle. The HMMWV can be configured through the use of common components and kits to become a cargo/troop carrier, armament carrier, shelter carrier, ambulance, and TOW and Stinger weapons carrier. The prime contractor is AM General of Mishawaka, IN.

Mission: The HMMWV fulfills specific missions such as serving as the platform for several weapon systems and provides for a partially armored (Uparmored) vehicle for scout and military police missions.

**Program Acquisition Costs
(\$ Millions)**

	<u>FY 2003</u>		<u>FY 2004</u>		<u>FY 2005</u>	
	<u>(Qty)</u>	<u>Amt</u>	<u>(Qty)</u>	<u>Amt</u>	<u>(Qty)</u>	<u>Amt</u>
Procurement						
Up-Armor	(956)	183.2	(1,565)	304.6	(818)	163.0
Other Variants	(1,829)	151.7	(1,129)	126.8	(1,613)	140.7
TOTAL		334.9		431.4		303.7

**OTHER PROGRAMS
DOD-WIDE/JOINT**

MISSILE DEFENSE

Description: A multi-layer, multifaceted development program designed to protect the United States, our Allies and deployed forces from missile attack. The program is managed as one system that will explore concepts and eventually develop air, sea, ground, and space systems that will intercept any range of threat in the boost, midcourse or terminal phases of flight trajectory. As these programs mature in their acquisition cycle they will transfer to the respective military department. Major systems include Ground Based Midcourse (formerly National Missile Defense), Airborne Laser, Sea Based Midcourse (formerly Navy Theater Wide), Theater High Altitude Area Defense (THAAD), PATRIOT PAC-3 and Space Tracking and Surveillance System (formerly Space Based Infra-Red System - Low (SBIRS-L)).

Mission: To conduct research and development of defensive technologies and related systems that may enable the destruction of ballistic missiles and warheads in flight; and to develop systems that protect the U.S. as well as allied forces from a missile attack.

**Program Acquisition Costs
(\$ Millions)**

	<u>FY 2003</u>		<u>FY 2004</u>		<u>FY 2005</u>	
	<u>(Qty)</u>	<u>Amt</u>	<u>(Qty)</u>	<u>Amt</u>	<u>(Qty)</u>	<u>Amt</u>
Procurement						
PATRIOT PAC-3	(122)	607.1	(135)	616.9	(108)	489.3
PATRIOT Mods		<u>148.6</u>		<u>201.1</u>		<u>87.9</u>
Subtotal		755.7		818.0		577.2
RDT&E (MDA)						
BMD Technologies		151.2		225.3		204.3
Advanced Concepts		-		150.0		256.2
BMD System Segment	1,026.6		-		-	
MEADS	101.8		-		-	
Patriot PAC-3	138.9		-		-	
THAAD	864.2		716.3		833.7	
Midcourse Def Segment	3,056.0		3,724.1		4,384.8	
Boost Defense Segment	705.6		617.3		492.6	
International Coop Pgms	150.4		227.2		159.6	
BMD Sensors	301.3		396.1		592.0	
BMD System Interceptors	-		117.7		511.3	
BMD Test & Targets	-		633.8		713.7	
BMD Products	-		305.3		418.6	
BMD System Core	-		445.4		479.8	
Other Programs		<u>191.0</u>		<u>67.0</u>		<u>100.1</u>
Subtotal		6,687.0		7,625.5		9,146.7

**OTHER PROGRAMS
DOD-WIDE/JOINT**

MISSILE DEFENSE

	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>
	<u>(Qty)</u> <u>Amt</u>	<u>(Qty)</u> <u>Amt</u>	<u>(Qty)</u> <u>Amt</u>
RD&E (Army)			
PATRIOT PAC-3	-	156.8	64.2
PATRIOT Improvements	39.3	46.1	31.7
MEADS	<u>-</u>	<u>249.4</u>	<u>264.5</u>
Subtotal	39.3	452.3	360.4
 RD&E (The Joint Staff)			
JTAMDO	74.9	85.1	86.4
 Military Construction	<u>24.9</u>	<u>22.0</u>	<u>22.3</u>
 TOTAL	7,581.8	9,002.9	10,193.0